Supported Employment: Evidence for an Evidence-Based Practice

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Supported employment for people with severe mental illnesses is an evidence-based practice, based on converging findings from 4 studies of the conversion of day treatment to supported employment and 9 randomized controlled trials comparing supported employment to a variety of alternative approaches. These two lines of research suggest that between 40% and 60% of consumers enrolled in supported employment obtain competitive employment while less than 20% of similar consumers do so when not enrolled in supported employment. Consumers who hold competitive jobs for a sustained period of time show benefits such as improved self-esteem and better symptom control, although by itself, enrollment in supported employment has no systematic impact on nonvocational outcomes, either on undesirable outcomes, such as rehospitalization, or on valued outcomes, such as improved quality of life. The psychiatric rehabilitation field has achieved consensus on a core set of principles of supported employment, although efforts continue to develop enhancements. A review of the evidence suggests strong support for 4 of 7 principles of supported employment, while the evidence for the remaining 3 is relatively weak. Continued innovation and research on principles is recommended.

Introduction

Within the psychiatric rehabilitation field, most consumers consider employment as a key element in recovery (Rogers, 1995; Steele & Berman, 2001). Family members (Noble, Honberg, Hall & Flynn, 1997; Steinwachs, Kasper & Skinner, 1992), mental health professionals (NASMHPD, 2002; New Freedom Commission on Mental Health, 2003), policy makers (Shumway et al., 2003) and society in general also view employment as a high priority and valued outcome. Most consumers with severe mental illnesses (SMI) want to work (McQuilken et al., 2003; Mueser, Salyers & Mueser, 2001; Rogers, Walsh, Masotta & Danley, 1991). In identifying work as a goal, consumers usually mean competitive employ-

ment, defined as community jobs that any person can apply for, in regular places of business, paying at least minimum wage, with mostly nondisabled coworkers. The large majority of consumers prefer competitive employment to sheltered work (Bedell, Draving, Parrish, Gervey & Guastadisegni, 1998; Bond, Dietzen, McGrew & Miller, 1995; Rogers et al., 1991). Unfortunately, consumer surveys often find that assistance with employment is a major unmet need, sometimes unrecognized by practitioners (Crane-Ross, Roth & Lauber, 2000; Noble et al., 1997).

Among the many different vocational approaches described in the literature, few have been adequately described, and, with one exception, none have a systematic body of rigorous research showing effectiveness in helping consumers with SMI achieve competitive employment (Bond, 1992; Bond, Drake, Becker & Mueser, 1999; Crowther, Marshall, Bond & Huxley, 2001; Honey, 2000; Lehman, 1995; Schneider, Heyman & Turton, 2002). The one exception is supported employment. This paper identifies the principles defining this practice and reviews the evidence supporting both its overall effectiveness as well as for each of its principles.

The term "supported employment" refers both to a type of employment status and to a type of employment program. As an *employment status*, supported employment refers to "competitive work in integrated work settings...consistent with the strengths, resources, priorities, concerns, abilities, capabilities, interests, and informed choice of the individuals, for individuals with the most significant disabilities for whom competitive employment has not traditionally occurred; or for whom competitive employment has been interrupted or intermittent as a result of a significant disability" (Rehabilitation Act Amendments, 1998). As a *practice*, supported employment refers to programs to help people with disabilities find and keep these kinds of jobs.

This paper examines the practice of supported employment for individuals with severe mental illnesses. It is divided into three sections: (1) a brief description of the supported employment model; (2) summary of evidence regarding the effectiveness of supported employment; and (3) summary of evidence regarding the criticality of each of 7 principles of supported employment.

The Supported Employment Model

A crucial influence on the conceptualization of supported employment has been the work of Robert Drake and Deborah Becker in the development of the Individual Placement and Support (IPS) model (Becker & Drake, 1993, 2003). Among the key principles defining IPS are the following (Becker & Bond, 2002; Bond, 1998):

1. **Services Focused on Competitive Employment:** *The agency providing supported employment services is committed to competitive employment as an attainable goal for its consumers with SMI, devoting its resources for rehabilitation services to this endeavor, rather than to intermediate activities, such as day treatment or sheltered work. Supported employment programs focus on helping consumers obtain their own permanent competitive jobs.*
2. **Eligibility Based on Consumer Choice:** *No one is excluded who wants to participate. The only requirement for admission to a supported employment program is a desire to work in a competitive job. Consumers are not excluded on the basis of "work readiness," diagnoses, symptoms, substance use history, psychiatric hospitalizations, or level of disability.*
3. **Rapid Job Search:** *Supported employment programs use a rapid job search approach to help consumers obtain jobs directly, rather than providing lengthy pre-employment assessment, training, and counseling.*
4. **Integration of Rehabilitation and Mental Health:** *The supported employment program is closely integrated with the mental health treatment team. This principle means that supported employment staff participate regularly in treatment team meetings and interact with treatment team members outside of these meetings.*
5. **Attention to Consumer Preferences:** *Services are based on consumers' preferences and choices, rather than providers' judgments. Staff and consumers find individualized job placements, based on consumer preferences, strengths, and work experiences.*
6. **Time-Unlimited and Individualized Support:** *Follow-along supports are individualized and continued indefinitely. Supported employment programs remain committed to the support of consumers long after they have achieved employment, avoiding artificial deadlines for program terminations that may be dictated by funding sources.*

Starting in the 1990s and continuing to the present, Drake and Becker have conducted a series of studies on IPS, many of which are reviewed below. Their initial conceptualization remains essentially unchanged from their original practice manual (Becker & Drake, 1993) up to their recent second edition

(Becker & Drake, 2003). The unique contribution of IPS was not so much the invention of new techniques as it was the distillation of the best knowledge in the field at that time and the rejection of unfounded ideas. Two assumptions once in vogue that have been discarded because research has proven them to be unhelpful are: (1) people with SMI need an extended period of time in vocational preparation before entering a competitive job in order to become work ready and to identify career goals (Anthony & Blanch, 1987) and (2) rehabilitation services should be provided separately from mental health treatment services (Noble et al., 1997). A third idea, included in the definition of supported employment in the federal legislation (Rehabilitation Act Amendments, 1998) but not incorporated into the IPS model, was the use of transitional employment (Beard, Propst & Malamud, 1982). Transitional employment consists of time-limited job placements developed by a rehabilitation agency that consumers work in preparation for competitive jobs. The debate over the merits of transitional employment (and other forms of "protected work," i.e., jobs reserved for people with disabilities) continues. Transitional employment is a defining feature of the clubhouse model (Macias, Barreira, Alden & Boyd, 2001), although its use appears to be diminishing (Cook & Razzano, 1995; Starks, Zahniser, Maas & McGuirk, 2000).

One element in IPS that does appear to be an original and critically important contribution is the model's organizational structure, which stipulates that employment programs operate in close collaboration with mental health treatment teams (an idea extrapolated from the assertive community treatment model), *but* in a fashion in which the employment program retains its separate identity and mission. The IPS model differs in this respect from the formulation by the Madison Program for Assertive Community Treatment (PACT), which conceives of vocational specialists as practitioners who devote part of their time to employment and part of their time to mental health treatment (Russert & Frey, 1991). Anecdotally, PACT's formulation of the vocational specialist role appears to result sometimes in a less dependable focus on employment, because it diffuses the vocational focus within the team and creates role conflict for the practitioner expected to balance vocational and clinical responsibilities.

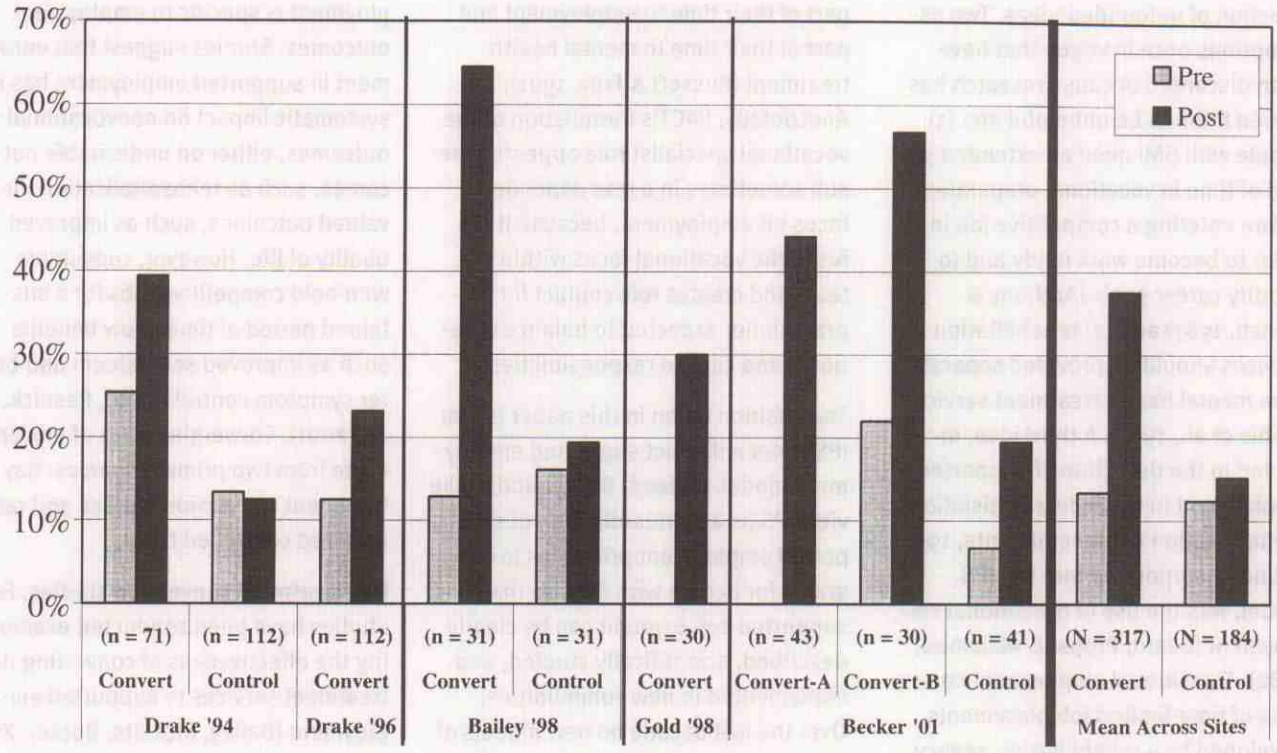
The position taken in this paper is that IPS is *not* a distinct supported employment model. Instead, Becker and Drake view IPS as a standardization of supported employment principles in programs for people with SMI, so that supported employment can be clearly described, scientifically studied, and implemented in new communities. Over the last decade no new models of supported employment for people with SMI articulating a distinctly different set of principles than those of IPS have appeared in the literature. Therefore, it makes sense to consider the IPS principles as a starting point for the principles of supported employment, recognizing that additions, refinements, and deletions are all ongoing processes in an empirical approach to defining an evidence-based practice. In this paper, the term IPS is used interchangeably with evidence-based supported employment.

Evidence for the Effectiveness of Supported Employment

Using the most stringent requirements for level of evidence, all the recent reviews of supported employment for consumers with SMI point to the conclusion that it should be considered an evidence-based practice (Bond, Becker, et al., 2001; Bond, Drake, Mueser & Becker, 1997; Crowther et al., 2001; Ridgway & Rapp, 1998; Schneider et al., 2002; Twamley, Jeste & Lehman, 2003). The impact of supported employment is specific to employment outcomes. Studies suggest that enrollment in supported employment has no systematic impact on nonvocational outcomes, either on undesirable outcomes, such as rehospitalization, or on valued outcomes, such as improved quality of life. However, consumers who hold competitive jobs for a sustained period of time show benefits such as improved self-esteem and better symptom control (Bond, Resnick, et al., 2001). Converging lines of evidence come from two primary sources: day treatment conversion studies and randomized controlled trials.

Day treatment conversion studies. Four studies have been conducted examining the effectiveness of converting day treatment services to supported employment (Bailey, Ricketts, Becker, Xie & Drake, 1998; Becker, Bond, et al., 2001; Drake et al., 1994; Drake, Becker, Biesanz, Wyzik & Torrey, 1996; Gold & Marrone, 1998). These studies involved 6 different sites converting from day treatment to supported employment, 5 of which closed down their day treatment services altogether (Becker, Bond, et al., 2001; Drake et al., 1994; Drake, Becker, et al., 1996; Gold & Marrone, 1998) and one which curtailed its day treatment services (Bailey et al., 1998). The first study compared a day treatment program conversion to a center that did not initially convert its services (Drake et al., 1994), but later did (Drake, Becker, et al., 1996); the second compared a portion of their program that converted to a group of day treatment clients not involved in the conversion (Bailey et al., 1998); the third compared two centers undergoing conversions to one that did not (Becker, Bond, et al., 2001); and the

FIGURE 1—COMPETITIVE EMPLOYMENT RATES BEFORE AND AFTER CONVERTING FROM DAY TREATMENT TO SUPPORTED EMPLOYMENT



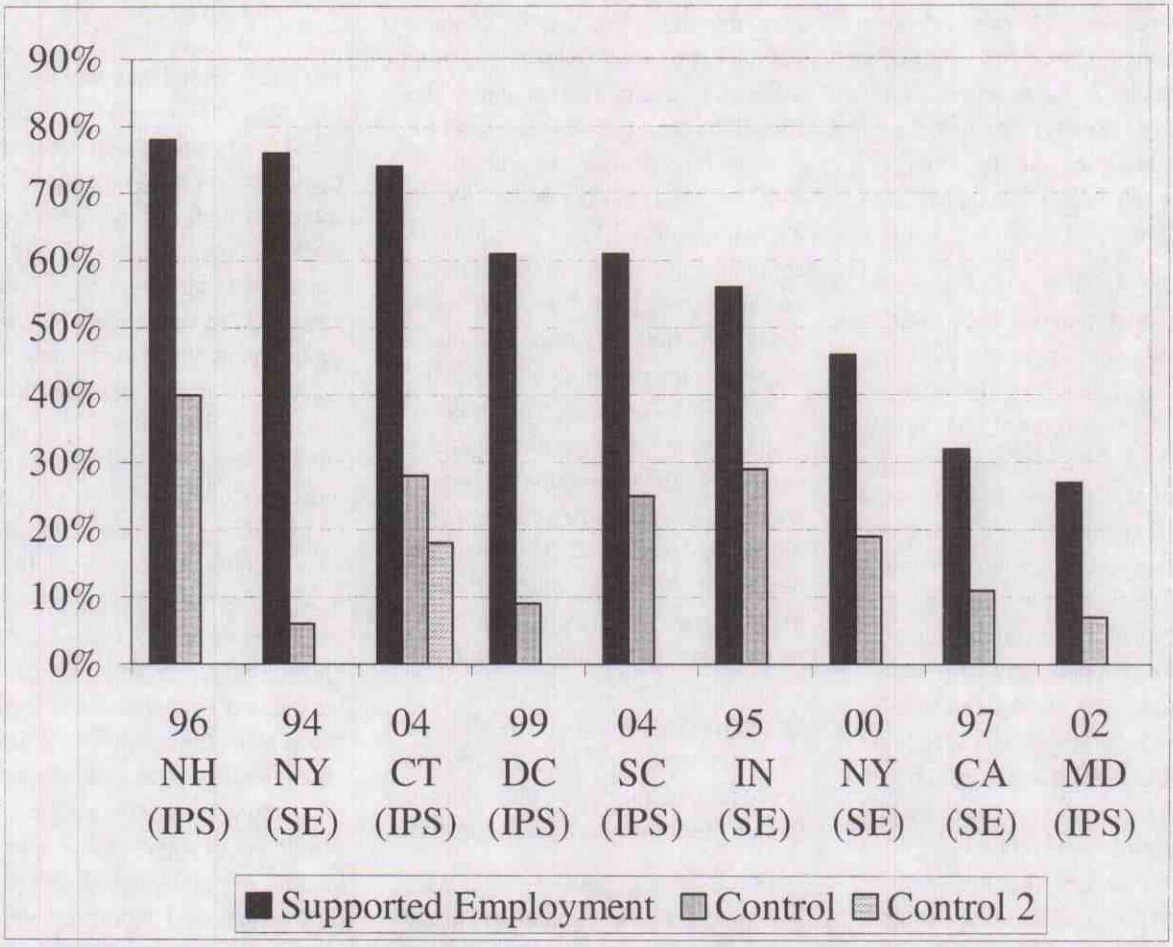
Notes: Drake (1994) and (1996) based on 1-year baseline and 1-year follow-up; Bailey (1998) baseline based on 3-month period before conversion and post data based on final 3-month period of follow-up year; Gold (1998) based on indeterminant baseline period before conversion and 1-year follow-up; Becker (2001) based on 6-month baseline and 24-month follow-up. Gold (1998) and Becker's (2001) Conversion Site A had 0% employment at baseline.

fourth was a 1-year follow-up study of consumers enrolled in a day treatment program after its closing (Gold & Marrone, 1998). The sample in this last study consisted of consumers who originally were referred because they "had no rehabilitation potential." They had averaged over 8 years of attendance and none had any recent employment.

Pre-post employment rates in these 6 conversion sites and 3 comparison sites are shown in Figure 1. Altogether, these studies included 317 consumers in sites converting to supported employment and 184 consumers in the comparison sites. The pre-post time periods varied across studies, ranging from 3 to 12 months for baseline and from 3 to 24 months for follow-up. During the baseline period, while consumers were still attending day treatment, the employment rate was 13% in the conversion sites and 12% in the comparison sites. During follow-up, after the converting sites had switched to supported employment, 38% of the consumers in the supported employment sites worked competitively, compared to 15% of the consumers in the comparison sites. On average, then, the percentage of consumers obtaining competitive jobs nearly tripled after conversion of day treatment to supported employment, while competitive employment rates in nonconverting sites remained virtually static.

One rival hypotheses sometimes offered to explain these findings is that because consumers have often been enrolled for years in day treatment prior to a conversion, they are better prepared to enter the work force. However, this hypothesis does not appear credible, given the unpublished findings from the Rhode Island study

FIGURE 2—EMPLOYMENT RATES IN 9 RANDOMIZED CONTROLLED TRIALS OF SUPPORTED EMPLOYMENT



Note: Studies identified by date and location:

Drake, McHugo et al. (1996)	96 NH (IPS)
Gervey and Bedell (1994)	94 NY (SE)
Mueser et al. (2004)	04 CT (IPS)
Drake et al. (1999)	99 DC (IPS)
Gold et al. (2004)	04 SC (IPS)
Bond, Dietzen, McGrew et al. (1995)	95 IN (SE)
McFarlane et al. (2000)	00 NY (SE)
Chandler et al. (1997)	97 CA (SE)
Lehman et al. (2002)	02 MD (IPS)

(Becker, Bond, et al., 2001). After the closure of one program, new admissions directly to the supported employment program (i.e., consumers who previously would have gone into day treatment) increased their rate of competitive employment to over 50% even more rapidly than former day treatment clients (Becker & Drake, 2003). There is no evidence that attendance in day treatment is a useful strategy for preparing consumers for competitive employment.

Despite their relative lack of research rigor, day treatment conversion studies are appealing to practitioners and program planners, because they offer a vivid picture of how the status quo can be transformed. Most impressive about the increased employment rates is that the day treatment samples include a range of consumers, including some who have no interest in working. Replications of these studies, particularly in sites outside the northeast United States, are needed to establish generalizability. We need research to better understand the factors supporting major organizational changes such as day treatment conversions. Organizational readiness and reimbursement mechanisms supporting conversions are undoubtedly two conditions necessary for a successful conversion.

Randomized controlled trials (RCTs). Bond, Becker, et al., (2001) summarized the findings for 8 RCTs comparing supported employment to a variety of traditional vocational services for people with SMI (Bond, Dietzen, McGrew, et al., 1995; Chandler, Meisel, Hu, McGowen & Madison, 1997; Drake et al., 1999; Drake, McHugo, Becker, Anthony & Clark, 1996; Gervey & Bedell, 1994; Gold et al., submitted; McFarlane et al., 2000; Mueser et al., 2004). Since that time, a 9th study has been published (Lehman et al., 2002). These 9 studies have been conducted by 7 different research teams (although Becker and Drake were consultants on the Gold and Lehman studies) in various geographic regions (Indiana, California, New Hampshire, District of Columbia, New York, South Carolina, Connecticut, and Maryland), representing both rural and urban communities. Five of the studies have compared IPS to some form of standard practice (Drake et al., 1999; Drake, McHugo, et al., 1996; Gold et al., submitted; Lehman et al., 2002; Mueser et al., 2004). In every case, fidelity to the IPS model was ensured through intensive training and monitoring using the IPS Fidelity Scale (Bond, Becker, Drake & Vogler, 1997). The remaining 4 studies used "pre-fidelity" versions of supported employment incorporating most of, but not necessarily all, the principles described above. All 9 studies compared a newly-established or relatively new supported employment program to established vocational services. Except for the Mueser study, which had two comparison groups, all of the studies compared supported employment to one alternative vocational approach.

The comparison groups were diverse. Two studies used a comparison group consisting of a brokered form of supported employment (i.e., free-standing rehabilitation programs providing a version of supported employment lacking integration of mental health treatment and employment services) (Drake, McHugo, et al., 1996; Mueser et al., 2004). In 2 studies one comparison group was a psychosocial rehabilitation program (Lehman et al., 2002; Mueser et al., 2004). In 3 studies the comparison group consisted of sheltered workshops (Drake et al., 1999; Gervey & Bedell, 1994; Gold et al., submitted). One study compared rapid job search supported employment to a condition in which consumers received prevocational training prior to referral to supported employment (Bond, Dietzen, McGrew, et al., 1995). The final 2 studies compared supported employment to referral to the state-federal vocational rehabilitation (VR) program (Chandler et al., 1997; McFarlane et al., 2000).

The studies used a variety of measures to assess effectiveness of employment services, including the percentage obtaining competitive employment, total wages earned, and number of weeks worked. In general, most indicators of objective employment outcome converge toward similar conclusions (Crowther et al., 2001; Twamley et al., 2003). One important exception is job tenure at a given job; among consumers who work, the research has not indicated longer job tenure for those in supported employment. The current review is limited in its focus to the single indicator of percentage of consumers obtaining competitive employment, as shown in Figure 2. Although the studies did vary in absolute employment rates, all 9 studies showed a pattern of substantially better employment outcomes for consumers receiving supported employment. The average competitive employment rate was 56% for consumers in supported employment, compared to 19% for controls, yielding a large mean effect size of .85 (weighting each study equally).

A novel feature within this body of research is that, in at least 6 of the studies, the supported employment program was newly established and compared against established and well-regarded vocational services (Bond, Dietzen, McGrew, et al., 1995; Drake et al., 1999; Drake, McHugo, et al., 1996; Gold et al., submitted; Lehman et al., 2002; Mueser et al., 2004). In several studies, the comparison program was widely regarded in the community at that time as "best practices" in vocational rehabilitation.

The implications are that supported employment yields superior employment outcomes compared to standard services, even factoring in the commonly encountered difficulties of the start-up phase of implementation. Of the comparison groups, referral to VR would be considered the weakest, given the dismal record overall for this agency, especially for consumers with SMI (Noble et al., 1997). Nonetheless, one RCT evaluating a well-regarded vocational approach—the Choose-Get-Keep skill building approach—failed to show differences in competitive employment outcomes compared with a control group who were referred to VR (Rogers, 2000). In summary, the RCTs of supported employment have involved reasonably stringent tests of its effectiveness.

Several additional studies, some of which are still in progress, offer further stringent tests of the effectiveness of supported employment by comparing it to strong alternatives, while others offer enhancements of the basic model. RCTs in progress include a multinational European study (Burns, Oxford University, UK) and a Canadian study (Latimer, Douglas Hospital, Montreal) comparing IPS to usual services, a study comparing IPS to a diversified placement approach (Bond, IUPUI), two studies comparing standard IPS to IPS + skills training (Tsang, Hong Kong Polytechnic University; Marder, UCLA) and another comparing IPS + skills training to referral to VR services (Nuechterlein, UCLA), and a study evaluating a motivational interviewing enhancement of IPS intended to increase consumer interest in employment (Corrigan, University of Chicago). Two recent experimental studies compared enhancements of supported employment to supported employment without these enhancements. In Maine, McFarlane and colleagues studied an enhancement involving organized participation of the family and the formation of an employer's council (McFarlane, 2002); and in Texas, Toprac and colleagues studied a social network enhancement to supported employment (Toprac, unpublished). Using a quasi-experimental design, an Oregon project evaluated "IPS Plus," an approach seeking to intensify consumer choice (Paulson, Post, Herinckx & Risser, 2002). To date, none of these innovations have demonstrated incremental utility over the evidence-based supported employment approach previously outlined. Nevertheless, efforts to refine evidence-based practices are critical in order to avoid the rigidity of beliefs to which proponents of a practice are so very susceptible.

Finally, one recent study compared a well-established clubhouse program to a newly-developed PACT program (Macias, 2001). Of particular note is the comparison to the clubhouse model, which has been widely disseminated but infrequently studied. The clubhouse program was accredited by the International Center for Clubhouse Development, using standards defining high fidelity to the clubhouse model (Macias et al., 2001). Conversely, the PACT program attained high fidelity to the ACT model (Teague, Bond & Drake, 1998). In addition, its vocational services attained high fidelity to most items on the IPS Fidelity Scale, although the PACT approach requires the vocational specialist to provide clinical services in addition to vocational services, which the IPS model does not. The employment outcomes measured in this study did not differentiate between competitive employment and protected jobs developed by the clubhouse program, so direct comparisons to the supported employment programs reviewed above are difficult. Neither program showed clearly superior employment outcomes. A nonsignificantly higher percentage of PACT clients achieved employment than clubhouse members, apparently largely a result of a significantly higher dropout rate for clubhouse members. (During the last 6-month period of the 2-year follow-up, 40% of clubhouse participants had dropped out, compared to 19% of PACT clients.) However, among those who achieved employment, the clubhouse sample averaged more days of employment than the PACT sample. A fascinating finding from the study was the low proportion (28%) of transitional employment placements among the clubhouse jobs held during the study—lower than one might expect based on the clubhouse literature.

Two factors may have diminished the vocational effectiveness of the PACT program in this study. First, the start-up phase is generally longer and more difficult for a PACT program than for a supported employment program only. Simultaneously developing both a new PACT program and its vocational component may have compounded the challenges of start-up. Second, the PACT model approach to defining the vocational specialist role may be less effective than programs in which employment specialists have exclusively vocational responsibilities, although this hypothesis has not been experimentally studied.

Evidence for the Principles of Supported Employment

This section examines the evidence supporting the criticality of 7 principles of supported employment, including the 6 IPS principles defined above, plus one additional principle, *benefits counseling*, which refers to ongoing planning and guidance to help consumers make well-informed decisions regarding Social Security, Medicaid, and other government entitlements. Evidence is examined from three

sources: expert opinion, studies of supported employment "as a package," and studies shedding light on individual principles.

Evidence from Expert Opinion

The published sources describing the principles (or "critical ingredients") of supported employment for people with SMI generally show large areas of agreement (Bond, 1994, 1998; Cook & Razzano, 2000; Gowdy, Carlson & Rapp, 2003; Ridgway & Rapp, 1998). Cook and Razzano (2000) identified 6 principles, including 4 similar to the IPS principles, and benefits counseling. A scale developed to measure fidelity to the IPS model (Bond, Becker et al., 1997) consists of 15 behavioral indicators of high-quality supported employment programs. It includes additional practice guidelines gleaned from the literature, which provide concrete prescriptions, such as recommendations on employment specialists' caseload size (25:1 or lower) and time spent in community settings as opposed to the office (employment specialists spend 70% of their time in the community) (Bond, Becker, et al., 1997). Many other practical suggestions are given by Becker and Drake (2003) and by a "toolkit" on supported employment being disseminated nationally as part of the National Evidence-Based Practice Project (Becker & Bond, 2002).

One strategy used to identify principles of a practice is to enlist the opinions of experts and practitioners. Evans (2002) surveyed 19 experts and 55 practitioners in the supported employment field, who provided ratings on a 59-item checklist of putative principles of supported employment. The top-ranked items were similar in the two respondent groups, and they agreed closely with the published literature, endorsing as important all 6 of the IPS principles listed above, as well as other, more specific practice guidelines. Overall, the 10 top-ranked items were as follows: (1) Benefits counseling; (2) Non-exclusionary policy (i.e., not excluding consumers from services); (3) Adequate funding available; (4) Individualized job supports; (5) Attention to consumer preferences; (6) Job match; (7) Focus on competitive employment; (8) Recovery philosophy; (9) Employment specialist contact with mental health treatment team; (10) Rapid job search. Thus, within the supported employment field there appears to be wide consensus on most of the basic principles. This shared understanding of the practice is an extraordinary development given the relatively brief period of time it has been in existence. It stands in contrast to the lack of definitional consensus in many other areas of psychiatric rehabilitation.

Evidence Regarding Supported Employment Principles as a "Package"

Indirect evidence that a specific set of principles leads to better employment outcomes is indicated by the fact that 5 of the RCTs reviewed above used the IPS Fidelity Scale to measure and ensure high fidelity to IPS principles. A comparison between these 5 studies and the 4 "pre-fidelity" studies is instructive. As shown in Figure 2, the 9 RCTs were rank ordered according to the competitive employment rates for the supported employment program. Of the 5 studies with high fidelity to the IPS model, 4 attained competitive employment rates exceeding 60%. In the 4 remaining studies, the supported employment program was not as explicitly defined and lacked one or more of the above evidence-based principles. In only one of these 4 studies did the competitive employment rate exceed 60%. The single study in which the IPS model had a low competitive employment rate (27%) enrolled consumers regardless of their interest in employment, explaining their low success rate.

In a qualitative study, Gowdy, Carlson, and Rapp (2003) examined employment rates for 27 community mental health centers in Kansas, identifying program features differentiating the 5 centers with the highest employment rates from the 4 with the lowest rates. Three of the 7 supported employment principles identified above emerged from their analysis. The high performing centers (1) strongly focused on competitive employment, with an absence of prevocational training; (2) emphasized consumer preferences in job selection; and (3) had close integration between supported employment and case management services.

Finally, two studies have examined the correlation of program fidelity to employment outcomes across sites within a state (Becker, Smith, Tanzman, Drake & Tremblay, 2001; McGrew, in preparation). In both studies, programs with higher fidelity scale ratings had better employment outcomes.

Evidence for Individual Supported Employment Principles

Although researchers have rarely experimentally evaluated the impact of specific principles in isolation, the patterns of evidence found in the literature provide moderate to strong support for several of the key elements, as examined in previous reviews (Bond, 1998; Bond, Becker, et al., 2001). This section updates these reviews, providing a brief status report on the research on each principle, along with a global assessment for the strength of the evidence.

1. **Services Focused on Competitive Employment.** *Strong evidence, including direct experimental and quasi-experimental studies.*

Embedded within this first principle are several important, complicated ideas:

(A) Specific targeted efforts toward competitive employment are more effective than indirect strategies;
(B) Day treatment, sheltered employment, and other approaches lacking a competitive employment focus, do not contribute to, and may interfere with, the goal of competitive employment;
(C) Competitive employment outcomes are more desired and more recovery-oriented than other forms of paid employment.

A. Specific targeted efforts toward competitive employment are more effective than indirect strategies. The first aspect is the principle that the best way to achieve employment is to directly help the consumer to find and keep such jobs. Although proponents are diminishing, an alternative viewpoint is that assisting consumers with the management of their illnesses or in their general improvement of social competencies will have a "spread effect" on the domain of vocational functioning *even in the absence of specific vocational interventions*. The preponderance of evidence suggests that interventions not specifically directed toward employment have little or no impact on competitive employment outcomes.

Psychotherapy, for example, was once believed to be a possible pathway to general improvement in psychosocial functioning and consequently to better prospects for employment (Gunderson et al., 1984). Consistent with this view, 3-year outcomes from one RCT showed significantly higher employment rates for consumers receiving "personal therapy" than controls receiving supportive therapy (Hogarty, 2002). (Personal therapy is a theoretically-grounded psychotherapy emphasizing gradual phases of change.) However, virtually all other psychotherapy studies have failed to support the spread hypothesis and it currently has few proponents. Family psychoeducation has also been proposed as helpful to improving employment outcomes (McFarlane, Dushay & Stastny, 1995); its impact on employment outcome is modest in the absence of a targeted vocational program (Mueser, Salyers, et al., 2001). Similarly, few experts assume that excellent case management services, in and of themselves, lead to better employment outcomes. The literature suggests case management in the absence of specific vocational efforts has little impact on employment (Bond, Drake, Mueser & Latimer, 2001), although one recent study did find a correlation between high fidelity to assertive community treatment and employment outcomes (Resnick, Neale & Rosenheck, 2003). Case management services resulting in improved employment outcomes probably do so because of targeted employment services (Brekke, Long, Nesbitt & Sobel, 1997).

Although medications can lead to better symptom control and to cognitive improvements, there is little research to suggest a direct impact on vocational functioning in the absence of psychosocial interventions. In its most optimistic form, some advocates have hypothesized that use of newer medications, such as atypical antipsychotics, would lead to increased employment rates. A multi-site RCT found a significantly higher employment rate for consumers with schizophrenia prescribed olanzapine than those prescribed haloperidol (Hamilton, Edgell, Revicki & Breier, 2000). However, the employment rate at 1-year follow-up in their olanzapine sample was only 15% (compared to 5% for controls). Most research suggests that the impact of medications alone on employment is small, dwarfed by vocational interventions (Bond et al., 2004). Careful management of medications in conjunction with supported employment may lead to the best employment outcomes (Bond & Meyer, 1999).

B. Day treatment, sheltered employment, and other approaches lacking a competitive employment focus, do not contribute to and may interfere with the goal of competitive employment. The strongest evidence for the ineffectiveness of day treatment is given by the day treatment conversion studies reviewed above. The dismal employment rates in most such programs, suggested by Figure 1, are replicated in hundreds of programs nationwide.

Like day treatment, psychosocial rehabilitation programs often lack a strong vocational emphasis (Bond, Dietzen, Vogler, et al., 1995; Connors, Graham & Pulso, 1987; Lucca & Allen, 2001), although some also excel in this area. As noted above, studies comparing supported employment to psychosocial rehabilitation programs found substantially better competitive employment outcomes for the former (Lehman et al., 2002; Mueser et al., 2004).

The ineffectiveness of sheltered workshops for helping individuals progress to competitive employment is well established (Drake et al., 1999; Gervey & Bedell, 1994; Gold et al., submitted). In programs that offer both sheltered and community employment, consumers obtaining sheltered jobs are far less likely to work competitively than those who do not (Cook & Razzano, 1995). Reports from the United Kingdom are congruent with the U.S. experience (Schneider et al., 2002).

If a program embraces the goal of competitive employment, then one corollary is that *most of the employment specialist's time will be spent in the community, not in an office or treatment program*. Becker et al. (2001) found that a single Supported Employment Fidelity Scale item assess-

ing whether employment specialists spent most of their direct contact time outside the office was the single best predictor of employment outcomes.

A final line of evidence regarding the ineffectiveness of day treatment and sheltered approaches consists of a series of statewide surveys suggesting that mental health centers de-emphasizing prevocational preparation for employment have higher competitive employment rates (Becker, Smith, et al., 2001; Drake et al., 1998; Gowdy et al., 2003; McGrew, in preparation). States also have had some success increasing employment by establishing competitive employment as a mental health center performance indicator (Hogan, 1999; Rapp, Huff & Hansen, 2003).

C. Competitive employment outcomes are more desired and more recovery-oriented than other forms of paid employment. Some leaders in the psychiatric rehabilitation field have implicitly or explicitly advocated for *paid* employment as a terminal goal from vocational rehabilitation services. This contrasting viewpoint has several versions. Some have argued that some consumers are not capable of working competitively, and that sheltered or protected work is the best option for them (Black, 1992; Dincin, 1995). Others have argued that transitional employment is a way to build confidence, work skills, and work history to enhance the potential to work competitively, but that in the meantime, transitional employment is a valued outcome in its own right (as well as being not dissimilar to supported employment positions in terms of duration) (Bilby, 1992). Still others argue that an array of agency-arranged jobs are the best way to ensure job placements for the most consumers (Chandler, Levin & Barry, 1999; Koop et al., in press; Shimon & Forman, 1991; Starks et al., 2000), especially in economies that feature high unemployment (Krupa, 1998).

It should be acknowledged that if paid employment is the goal, then programs offering sheltered/protected job placements sometimes achieve significantly better *paid* employment outcomes than do supported employment programs (e.g., Drake et al., 1999), although this is not always the case (Gervey & Bedell, 1994; Gold et al., submitted; Macias, 2001; Mueser et al., 2004). One important additional question is whether competitive employment jobs are intrinsically better or more desirable than sheltered or other types of protected employment. Some evidence suggests ways in which competitive employment may be a better outcome than sheltered employment. For example, one study found improved nonvocational outcomes (better control of symptoms, higher self-esteem, and improved quality of life) for consumers who had worked a sustained period of time on competitive employment, compared to those who worked little or none (Bond, Resnick, et al., 2001). Sheltered employment workers did not show these improvements. Other studies have also reported psychological benefits from competitive employment. Studies of sheltered workshop clients generally have not yielded such results (Dick & Shepherd, 1994), but head-to-head comparisons are generally lacking.

2. **Eligibility Is Based on Consumer Choice.** *Strong evidence from secondary analyses of RCTs that a wide range of clients benefit from supported employment.*

Within the general schizophrenia literature, numerous studies have sought to identify predictors of vocational functioning. The findings from this vast literature have been mixed and are not easily summarized. Certainly, many criteria routinely used to exclude people from vocational services are based on misconceptions. For example, substance use is widely used to exclude consumers with SMI from receiving vocational services, yet the preponderance of evidence suggests that co-occurring substance use disorder does not predict how well a consumer will do in employment (Bell, Greig, Gill, Whelahan & Bryson, 2002; Drebing et al., 2002; Pickett-Schenk et al., 2002; Sengupta, Drake & McHugo, 1998), although one study did find such a relationship (Lehman et al., 2002).

The more crucial finding is that *supported employment* studies have failed to find any specific client factors (such as diagnosis, symptomatology, age, gender, disability status, prior hospitalization, and education) that consistently predict better employment outcomes (Bond, Becker, et al., 2001). In other words, the literature provides no empirical justification for excluding any consumer from receiving supported employment services, based on the clinical or work history, "readiness," or any other factor commonly used as screening criteria. There is, however, evidence for the need to titrate the type and level of support to compensate for problematic symptoms and cognitive impairments, as well as the need to match consumers to jobs that suit their capabilities (McGurk & Mueser, 2003; McGurk, Mueser, Harvey, La Puglia & Marder, 2003).

3. **Rapid Job Search.** *Strong evidence, including direct experimental and quasi-experimental studies.*

The empirical support for rapid job placement has been well documented (Bond, 1998; Bond, Becker, et al., 2001). Happily, this principle is now widely accepted by most within the psychiatric rehabilitation community (Cook & Razzano, 2000; Crowther et al., 2001; Evans, 2002; Schneider et al., 2002). However, not all vocational

approaches subscribe to rapid placement, and of those that do, many do not practice rapid job placement. For example, a retrospective study of one well-regarded clubhouse program found that the average time spent in the clubhouse (e.g., on work units) before a member's first transitional employment placement was 356 days (Henry, Barreira, Banks, Brown & McKay, 2001)!

In various forms, skills training as a preparatory step to supported employment continues to enjoy popularity among some research groups (Wallace, Tauber & Wilde, 1999). One recent study did find superior employment outcomes from a skills training intervention (Tsang & Pearson, 2001), but this study stands in contrast to the preponderance of evidence (Bond, 1998).

Recent studies are examining skills training provided *concurrently with* supported employment, rather than as a preparatory step. Some researchers are reporting success with cognitive interventions (Bell, Lysaker & Bryson, 2003). The goal of these strategies is to improve work performance on the job. If these interventions are provided after a consumer obtains a job, not only can the well-established principle of rapid job search be maintained, but also the training can be personalized to the job situation, which intuitively should be a stronger intervention.

4. **Integration of Rehabilitation and Mental Health.** *Moderately strong evidence, including a consistent pattern of indirect evidence from experimental and quasi-experimental studies.*

The evidence continues to mount for the superiority of integration of mental health and vocational services over approaches in which these services are provided separately. The evidence presented in Bond's (1998) review was indirect, leading to cautious conclusions; new evidence (Gold et al., submitted; Gowdy et al., 2003; Lehman et al., 2002; Mueser et al., 2004) makes this case stronger, with the Mueser et al. (2004) study coming the closest to examining this factor in isolation. Based on these studies and on clinical experience, Drake et al. (2003) identified 4 tangible benefits from integrated approaches compared to non-integrated services: (1) more effective engagement and retention of consumers, (2) better communication between employment specialists and mental health clinicians, (3) conversion of clinicians to understand and focus on employment, and (4) incorporation of clinical information into vocational plans.

5. **Attention to Consumer Preferences.** *Moderate correlational evidence.*

As noted in prior reviews, studies have generally found longer job tenure for consumers who obtain jobs matching their occupational preferences (Becker, Bebout & Drake, 1998; Becker, Drake, Farabaugh & Bond, 1996; Carpenter & Perkins, 1997; Gervey & Kowal, 1994; Mueser, Becker & Wolfe, 2001). With creative and energetic employment specialists (Bissonnette, 1994), supported employment programs optimally find jobs uniquely tailored to the consumer strengths and preferences, including unconventional, not-easy-to-categorize positions (McGurk et al., 2003; Mueser et al., 2004).

6. **Time-Unlimited and Individualized Support.** *Weak evidence, primarily from one correlational study and anecdotal reports from other studies.*

One of the strongest tenets of supported employment is that services are not time-limited but are continued indefinitely. Moreover, the follow-along services are individualized to accommodate the unique needs of each individual, because we know from many consumers' stories of their recovery process that the journey is very personal and often not linear (Strauss, Hafez, Lieberman & Harding, 1985). Surprisingly, we have little direct evidence of this principle, with the best evidence coming from one correlational study of a group of consumers interviewed 42 months after enrollment in supported employment (McHugo, Drake & Becker, 1998).

Attention to the person-environmental fit and identification of accommodations in the workplace to facilitate success (MacDonald-Wilson, Rogers & Massaro, 2003) are important elements of job support. One study found a correlation between reception of employer accommodations and job tenure (Lucca, Henry, Banks, Simon & Page, 2004).

Indirect support for the importance of long-term support is suggested by a 10-year follow-up study of consumers enrolled in a supported employment program, which found encouragingly high rates of employment (Salyers, Becker, Drake, Torrey & Wyzik, 2004). Not surprising was the finding that consumers who were employed at follow-up attributed their success to many factors, including ongoing support from professionals and others. The sources of primary support varied widely. One surprise was the fact that some who did not work during the first year after enrollment were employed at follow-up. This finding underscores the importance of not giving up too early on consumers who do not benefit initially.

7. **Benefits Counseling.** *Weak evidence, based on one quasi-experimental study.*

One of the largest barriers to employment is fear of losing benefits (MacDonald-Wilson, Rogers, Ellison &

Lyass, 2003). Both practitioners as well as experts recognize the importance of the provision of benefits counseling as part of a supported employment program (Evans, 2002). Benefits counseling was the most frequently mentioned job-related support in one study (Lucca et al., 2004). A Vermont study found that a well-designed program of systematic benefits counseling led to significantly higher earnings from employment for vocational rehabilitation clients, compared to historical controls (Tremblay, Smith, Xie & Drake, in press).

Conclusions

This paper has updated the research on the effectiveness of supported employment and its principles. Over the last decade, the evidence has increased. The evidence gleaned from a dozen studies drawn from two types of rigorous research designs shows consistent support for the effectiveness of supported employment, particularly when delivered in a high-fidelity manner. This set of findings is in striking contrast to the literature on other types of vocational programs for consumers with SMI. No other vocational model is as clearly defined, has been as widely studied, nor achieved a consistent pattern of positive outcomes regarding competitive employment.

If this practice is to continue to expand its utility, continued experimentation on enhancing the evidence-based practice and additional focused research evaluating specific program components are needed. Enhancements are particularly needed to improve the job tenure and career advancement of consumers who want to work.

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